

What is claimed is:

1. A natural language processing apparatus which uses a pattern rule having at least a pattern name and a pattern constituent element to obtain a syntax parsing result of at least an input sentence, comprising:

a with-sentence-ID pattern rule dictionary in which a pattern rule to which a sentence ID representing the probability of simultaneously applying a pattern rule to the same sentence is given is stored;

a morphological parsing section for morphologically parsing an input sentence to be parsed; and

a syntax parsing section which obtains a syntax parsing result constituted by a tree structure of a plurality of pattern rules with respect to a morphological parsing result with reference to the with-sentence-ID pattern rule dictionary and which employs a tree structure between pattern rules having pattern rules to which the same sentence ID is given and which increase in number.

2. A natural language processing apparatus according to claim 1, wherein, after the syntax parsing section obtains a syntax parsing result constituted by a tree structure of a plurality of pattern rules without consideration the sentence ID, on the basis of the sentence ID given to the pattern rules included in the result, cancellation of a plurality of candidates is performed such that the number of pattern rules to which the same sentence ID is given increases, and a final syntax parsing result is obtained.

3. A natural language processing apparatus according to claim 2, wherein when the syntax parsing section count the pattern rules to

which the same sentence ID is given, if a plurality of same pattern rules exist in a disjunctive structure, the pattern rules are counted one pattern rule.

4. A natural language processing apparatus according to claim 1, wherein the syntax parsing section determines lower pattern rules of a tree structure with reference to the with-sentence-IC pattern rule dictionary in each morpheme in the morphological parsing result and performs retrieval of an upper pattern rule for each of the lower pattern rules in preference to pattern rules to which the same sentence ID as that given to the lower pattern rules to obtain a final syntax parsing result.

5. A natural language processing apparatus according to claim 1, wherein the syntax parsing section determines lower pattern rules of a tree structure with reference to the with-sentence-IC pattern rule dictionary in each morpheme in the morphological parsing result, detects a sentence ID which is frequently given to the plurality of predetermined lower pattern rules, and performs retrieval of an upper pattern rule for each of the lower pattern rules in preference to pattern rules to which the same sentence ID as the detected sentence ID to obtain a final syntax parsing result.

6. A natural language processing apparatus according to claim 1, wherein, as a dictionary from which a pattern rule is retrieved, in addition to the with-sentence-IC pattern rule dictionary, a general-purpose pattern rule dictionary in which general-purpose pattern rules having no sentence ID are stored is arranged.

7. A natural language processing apparatus according to claim 1, wherein a pattern rule with sentence ID can be additionally registered

in the with-sentence-IC pattern rule dictionary.

8. A natural language processing apparatus according to claim 1, wherein, as the with-sentence-IC pattern rule dictionary, a plurality of with-sentence-IC pattern rule dictionaries which are discriminated depending on documents, fields, and the like.

9. A natural language processing apparatus according to claim 1, wherein the natural language processing apparatus is a mechanical translation apparatus, and the syntax parsing section performs syntax parsing to an original-language sentence.

10. A natural language processing method which uses pattern rules having at least pattern names and pattern constituent elements to obtain a syntax parsing result of at least an input sentence, comprising:

the morphological parsing step of preparing a with-sentence-ID pattern rule dictionary in which a pattern rule to which a sentence ID representing the probability of simultaneously applying a pattern rule to the same sentence is given is stored in advance and morphologically parsing an input sentence to be parsed; and

the syntax parsing step of obtaining a syntax parsing result constituted by a tree structure of a plurality of pattern rules with respect to a morphological parsing result with reference to the with-sentence-ID pattern rule dictionary and employing a tree structure between pattern rules having pattern rules to which the same sentence ID is given and which increase in number.

11. A natural language processing method according to claim 10, wherein, in the syntax parsing step, after a syntax parsing result constituted by a tree structure of a plurality of pattern rules is obtained without consideration the sentence ID, on the basis of the sentence ID

given to the pattern rules included in the result, cancellation of a plurality of candidates is performed such that the number of pattern rules to which the same sentence ID is given increases, and a final syntax parsing result is obtained.

12. A natural language processing method according to claim 11, wherein, in the syntax parsing step, when the pattern rules to which the same sentence ID is given are counted, if a plurality of same pattern rules exist in a disjunctive structure, the pattern rules are counted one pattern rule.

13. A natural language processing method according to claim 10, wherein, the syntax parsing step, lower pattern rules of a tree structure are determined with reference to the with-sentence-IC pattern rule dictionary in each morpheme in the morphological parsing result, retrieval of an upper pattern rule for each of the lower pattern rules is performed in preference to pattern rules to which the same sentence ID as that given to the lower pattern rules to obtain a final syntax parsing result.

14. A natural language processing method according to claim 10, wherein, in the syntax parsing step, lower pattern rules of a tree structure are determined with reference to the with-sentence-IC pattern rule dictionary in each morpheme in the morphological parsing result, a sentence ID which is frequently given to the plurality of predetermined lower pattern rules is detected, and retrieval of an upper pattern rule for each of the lower pattern rules is performed in preference to pattern rules to which the same sentence ID as the detected sentence ID to obtain a final syntax parsing result.

15. A natural language processing method according to claim 10,

wherein, as a dictionary from which a pattern rule is retrieved, in addition to the with-sentence-IC pattern rule dictionary, a general-purpose pattern rule dictionary in which general-purpose pattern rules having no sentence ID are stored is arranged.

16. A natural language processing method according to claim 10, wherein a pattern rule with sentence ID can be additionally registered in the with-sentence-IC pattern rule dictionary.

17. A natural language processing method according to claim 10, wherein, as the with-sentence-IC pattern rule dictionary, a plurality of with-sentence-IC pattern rule dictionaries which are discriminated depending on documents, fields, and the like.

18. A natural language processing method according to claim 10, wherein the natural language processing apparatus is a mechanical translation apparatus, and the syntax parsing step performs syntax parsing to an original-language sentence.

19. A natural language processing program in which the natural language processing method according to claim 10 is described in a code which can be executed by a computer.